

WEST Search History

DATE: Monday, July 28, 2003

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result set

DB=USPT; PLUR=YES; OP=ADJ

L4	papillomavirus and T cell adj epitope.clm.	4	L4
L3	papillomavirus and T cell adj epitope	76	L3
L2	papillomavirus and T cell and epitope.clm.	44	L2
L1	papillomavirus and T cell and epitope	476	L1

END OF SEARCH HISTORY

44	55	100.0	500	12	Q99A88
45	55	100.0	500	12	Q9WBR5
			500	12	Q9WBR6
			500	12	Q9WBR7

Q90204 human papil
 .012343 human papil
 Q99A88 human papil
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 Q9wbr5 human papil
 Q9wbr6 human papil
 Q9wbr7 human papil

ALIGNMENTS

RESULT 1

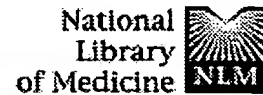
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 ID Q84315 PRELIMINARY; PRT; 44 AA.
 AC Q84315;
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
 DE L1 (Fragment).
 GN L1.
 OS Human papillomavirus type 56.
 OC Viruses; dsDNA viruses, no RNA stage; Papillomaviridae;
 OC Papillomavirus.
 OX NCBI_TaxID=10596;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=92407963; PubMed=1326639;
 RA Chan S.-Y., Bernard H.-U., Ong C.-K., Chan S.-P., Birgit H.,
 RA Delius H.;
 RT "Phylogenetic analysis of 48 papillomavirus types and 28 subtypes and
 variants: A showcase for the molecular evolution of DNA viruses.";
 RL J. Virol. 66:5714-5725(1992).
 DR EMBL; M96299; AAA47038.1; -.
 DR InterPro; IPR002210; PV_capsid_L1.
 DR Pfam; PF00500; late_protein_L1; 1.
 DR ProDom; PD000544; PV_capsid_L1; 1.
 FT NON TER 1 1
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 Query Match 100.0%; Score 55; DB 12; Length 44;
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 Db 22 ICWGNQLFV 30

RESULT 2
 073442

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Description

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 14 human papil
 5 human papil



PubMed	Nucleotide	Protein	Genome	Structure	PMC	Taxonomy	OMIM	Bo
Search PubMed	▼ for						Go	Clear
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Display	Summary	▼	Show: 20	▼	Sort	▼	Send to	Text	▼
Items 1-20 of 103							Page 1	of 6	Next

Entrez PubMed

- ☐ 1: [Ohlschlager P, Osen W, Dell K, Faath S, Garcea RL, Jochmus I, Muller M, Pawlita M, Schafer K, Sehr P, Staib C, Sutter G, Gissmann L.](#) [Related Articles, Links](#)

Human papillomavirus type 16 L1 capsomeres induce L1-specific cytotoxic T lymphocytes and tumor regression in C57BL/6 mice. *J Virol.* 2003 Apr;77(8):4635-45.
PMID: 12663770 [PubMed - indexed for MEDLINE]

PubMed Services

- ☐ 2: [Wakabayashi MT, Da Silva DM, Potkul RK, Kast WM.](#) [Related Articles, Links](#)

Comparison of human papillomavirus type 16 L1 chimeric virus-like particles versus L1/L2 chimeric virus-like particles in tumor prevention. *Intervirology.* 2002;45(4-6):300-7.
PMID: 12566713 [PubMed - indexed for MEDLINE]

Related Resources

- ☐ 3: [Revaz V, Benyacoub J, Kast WM, Schiller JT, De Grandi P, Nardelli-Haeffliger D.](#) [Related Articles, Links](#)















Mucosal vaccination with a recombinant *Salmonella typhimurium* expressing human papillomavirus type 16 (HPV16) L1 virus-like particles (VLPs) or HPV16 VLPs purified from insect cells inhibits the growth of HPV16-expressing tumor cells in mice. *Virology.* 2001 Jan 5;279(1):354-60.
PMID: 11145916 [PubMed - indexed for MEDLINE]








- ☐ 4: [De Bruijn ML, Greenstone HL, Vermeulen H, Melief CJ, Lowy DR, Schiller JT, Kast WM.](#) [Related Articles, Links](#)

L1-specific protection from tumor challenge elicited by HPV16 virus-like particles. *Virology.* 1998 Oct 25;250(2):371-6.
PMID: 9792847 [PubMed - indexed for MEDLINE]

- ☐ 5: [Peng S, Frazer IH, Fernando GJ, Zhou J.](#) [Related Articles, Links](#)

Papillomavirus virus-like particles can deliver defined CTL epitopes to the MHC class I pathway. *Virology.* 1998 Jan 5;240(1):147-57.
PMID: 9448699 [PubMed - indexed for MEDLINE]

-  **6:** Rocha-Zavaleta L, Alejandro JE, Garcia-Carranca A. [Related Articles, Links](#)
-  Parenteral and oral immunization with a plasmid DNA expressing the human papillomavirus 16-L1 gene induces systemic and mucosal antibodies and cytotoxic T lymphocyte responses.
J Med Virol. 2002 Jan;66(1):86-95.
PMID: 11748663 [PubMed - indexed for MEDLINE]
-  **7:** Feltkamp MC, Vreugdenhil GR, Vierboom MP, Ras E, van der Burg SH, ter Schegget J, Melief CJ, Kast WM. [Related Articles, Links](#)
-  Cytotoxic T lymphocytes raised against a subdominant epitope offered as a synthetic peptide eradicate human papillomavirus type 16-induced tumors.
Eur J Immunol. 1995 Sep;25(9):2638-42.
PMID: 7589138 [PubMed - indexed for MEDLINE]
-  **8:** Greenstone HL, Nieland JD, de Visser KE, De Bruijn ML, Kimbauer R, Roden RB, Lowy DR, Kast WM, Schiller JT. [Related Articles, Links](#)
-  Chimeric papillomavirus virus-like particles elicit antitumor immunity against the E7 oncoprotein in an HPV16 tumor model.
Proc Natl Acad Sci U S A. 1998 Feb 17;95(4):1800-5.
PMID: 9465097 [PubMed - indexed for MEDLINE]
-  **9:** Ressing ME, Sette A, Brandt RM, Rupprecht J, Wentworth PA, Hartman M, Oseroff C, Grey HM, Melief CJ, Kast WM. [Related Articles, Links](#)
-  Human CTL epitopes encoded by human papillomavirus type 16 E6 and E7 identified through in vivo and in vitro immunogenicity studies of HLA-A*0201-binding peptides.
J Immunol. 1995 Jun 1;154(11):5934-43.
PMID: 7538538 [PubMed - indexed for MEDLINE]
-  **10:** Azoury-Ziadeh R, Herd K, Fernando GJ, Frazer IH, Tindle RW. [Related Articles, Links](#)
-  T-helper epitopes identified within the E6 transforming protein of cervical cancer-associated human papillomavirus type 16.
Viral Immunol. 1999;12(4):297-312.
PMID: 10630789 [PubMed - indexed for MEDLINE]
-  **11:** Kowalczyk DW, Wlazlo AP, Shane S, Ertl HC. [Related Articles, Links](#)
-  Vaccine regimen for prevention of sexually transmitted infections with human papillomavirus type 16.
Vaccine. 2001 May 14;19(25-26):3583-90.
PMID: 11348726 [PubMed - indexed for MEDLINE]
-  **12:** Chen XS, Casini G, Harrison SC, Garcea RL. [Related Articles, Links](#)
-  Papillomavirus capsid protein expression in Escherichia coli: purification and assembly of HPV11 and HPV16 L1.
J Mol Biol. 2001 Mar 16;307(1):173-82.
PMID: 11243812 [PubMed - indexed for MEDLINE]

- ☐ **13:** Osen W, Jochmus I, Muller M, Gissmann L. [Related Articles, Links](#)
 **Immunization against human papillomavirus infection and associated neoplasia.**
J Clin Virol. 2000 Oct;19(1-2):75-8.
PMID: 11091150 [PubMed - indexed for MEDLINE]
- ☐ **14:** Sun X, Si L, Cao Z, Wang Y, Liu T, Guo J. [Related Articles, Links](#)
 **Immune response to plasmid DNA encoding HPV16-L1 protein.**
Chin Med J (Engl). 2000 Mar;113(3):277-80.
PMID: 11775264 [PubMed - indexed for MEDLINE]
- ☐ **15:** Liu WJ, Liu XS, Zhao KN, Leggatt GR, Frazer IH. [Related Articles, Links](#)
 **Papillomavirus virus-like particles for the delivery of multiple cytotoxic T cell epitopes.**
Virology. 2000 Aug 1;273(2):374-82.
PMID: 10915608 [PubMed - indexed for MEDLINE]
- ☐ **16:** Dupuy C, Buzoni-Gatel D, Touze A, Bout D, Coursaget P. [Related Articles, Links](#)
 **Nasal immunization of mice with human papillomavirus type 16 (HPV-16) virus-like particles or with the HPV-16 L1 gene elicits specific cytotoxic T lymphocytes in vaginal draining lymph nodes.**
J Virol. 1999 Nov;73(11):9063-71.
PMID: 10516012 [PubMed - indexed for MEDLINE]
- ☐ **17:** Feltkamp MC, Smits HL, Vierboom MP, Minnaar RP, de Jongh BM, Drijfhout JW, ter Schegget J, Melief CJ, Kast WM. [Related Articles, Links](#)
 **Vaccination with cytotoxic T lymphocyte epitope-containing peptide protects against a tumor induced by human papillomavirus type 16-transformed cells.**
Eur J Immunol. 1993 Sep;23(9):2242-9.
PMID: 7690326 [PubMed - indexed for MEDLINE]
- ☐ **18:** Yuan H, Estes PA, Chen Y, Newsome J, Olcese VA, Garcea RL, Schlegel R. [Related Articles, Links](#)
 **Immunization with a pentameric L1 fusion protein protects against papillomavirus infection.**
J Virol. 2001 Sep;75(17):7848-53.
PMID: 11483728 [PubMed - indexed for MEDLINE]
- ☐ **19:** Rudolf MP, Nieland JD, DaSilva DM, Velders MP, Muller M, Greenstone HL, Schiller JT, Kast WM. [Related Articles, Links](#)
 **Induction of HPV16 capsid protein-specific human T cell responses by virus-like particles.**
Biol Chem. 1999 Mar;380(3):335-40.
PMID: 10223336 [PubMed - indexed for MEDLINE]

- ☐ 20: [Matsumoto K, Kawana K, Yoshikawa H, Taketani Y, Yoshiike K, Kanda T.](#)

[Related Articles, Links](#)



DNA vaccination of mice with plasmid expressing human papillomavirus 6 major capsid protein L1 elicits type-specific antibodies neutralizing pseudovirions constructed in vitro.

J Med Virol. 2000 Feb;60(2):200-4.

PMID: 10596021 [PubMed - indexed for MEDLINE]

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Jul 17 2003 11:42:11

■

d 14 1-13

L4 ANSWER 1 OF 13 MEDLINE on STN
AN 2003147803 MEDLINE
DN 22550065 PubMed ID: 12663770
TI Human **papillomavirus** type 16 L1 capsomeres induce L1-specific
cytotoxic T lymphocytes and tumor regression in C57BL/6 mice.
AU Ohlschlager Peter; Osen Wolfram; Dell Kerstin; Faath Stefan; Garcea Robert
L; Jochmus Ingrid; Muller Martin; Pawlita Michael; Schafer Klaus; Sehr
Peter; Staib Caroline; Sutter Gerd; Gissmann Lutz
CS Angewandte Tumorstudiologie, Deutsches Krebsforschungszentrum, D-69120
Heidelberg, Germany.
NC CA37667 (NCI)
SO JOURNAL OF VIROLOGY, (2003 Apr) 77 (8) 4635-45.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200305
ED Entered STN: 20030331
Last Updated on STN: 20030506
Entered Medline: 20030505

L4 ANSWER 2 OF 13 MEDLINE on STN
AN 2002404484 MEDLINE
DN 22148797 PubMed ID: 12153516
TI Limitations of HLA-transgenic mice in presentation of HLA-restricted
cytotoxic T-cell epitopes from
endogenously processed human **papillomavirus** type 16 E7 protein.
AU Street Michael D; Doan Tracy; Herd Karen A; Tindle Robert W
CS Sir Albert Sakzewski Virus Research Centre, Royal Children's Hospital and
Clinical Medical Virology Centre, University of Queensland, Brisbane,
Australia.
SO IMMUNOLOGY, (2002 Aug) 106 (4) 526-36.
Journal code: 0374672. ISSN: 0019-2805.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200210
ED Entered STN: 20020803
Last Updated on STN: 20021002
Entered Medline: 20021001

L4 ANSWER 3 OF 13 MEDLINE on STN
AN 2002255192 MEDLINE
DN 21990309 PubMed ID: 11994451
TI Optimizing the efficacy of **epitope**-directed DNA vaccination.
AU Wolkers Monika C; Toebes Mireille; Okabe Masaru; Haanen John B A G;
Schumacher Ton N M
CS Department of Immunology, The Netherlands Cancer Institute, Plesmanlaan
121, 1066 CX Amsterdam, The Netherlands.
SO JOURNAL OF IMMUNOLOGY, (2002 May 15) 168 (10) 4998-5004.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200206
ED Entered STN: 20020508
Last Updated on STN: 20020620

Entered Medline: 20020619

L4 ANSWER 4 OF 13 MEDLINE on STN
AN 2001209046 MEDLINE
DN 21193745 PubMed ID: 11300474
TI Human T-cell responses to HLA-A-restricted high binding affinity peptides of human **papillomavirus** type 18 proteins E6 and E7.
AU Rudolf M P; Man S; Melief C J; Sette A; Kast W M
CS Cardinal Bernardin Cancer Center, Loyola University of Chicago, Maywood, Illinois 60153, USA.
NC P01 CA74182 (NCI)
R01 CA74397 (NCI)
SO CLINICAL CANCER RESEARCH, (2001 Mar) 7 (3 Suppl) 788s-795s.
Journal code: 9502500. ISSN: 1078-0432.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200108
ED Entered STN: 20010827
Last Updated on STN: 20010827
Entered Medline: 20010823

L4 ANSWER 5 OF 13 MEDLINE on STN
AN 2001206654 MEDLINE
DN 21144757 PubMed ID: 11249689
TI **Papillomavirus** virus-like particles as anticancer vaccines.
AU Da Silva D M; Velders M P; Rudolf M P; Schiller J T; Kast W M
CS Cardinal Bemardin Cancer Center & Department of Microbiology & Immunology, Loyola University, Chicago, 2160 S First Avenue, Maywood, IL 60153, USA.
NC P01 CA74182 (NCI)
R01 CA74397 (NCI)
R01 CA78399 (NCI)
T32 AI07508 (NIAID)
SO Curr Opin Mol Ther, (1999 Feb) 1 (1) 82-8. Ref: 60
Journal code: 100891485. ISSN: 1464-8431.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200104
ED Entered STN: 20010417
Last Updated on STN: 20010417
Entered Medline: 20010412

L4 ANSWER 6 OF 13 MEDLINE on STN
AN 2001096768 MEDLINE
DN 20546047 PubMed ID: 11091150
TI Immunization against human **papillomavirus** infection and associated neoplasia.
AU Osen W; Jochmus I; Muller M; Gissmann L
CS German Cancer Research Center, Im Neuenheimer Feld 280, G-9120, Heidelberg, Germany.
SO JOURNAL OF CLINICAL VIROLOGY, (2000 Oct) 19 (1-2) 75-8.
Journal code: 9815671. ISSN: 1386-6532.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200102

ED Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010201

L4 ANSWER 7 OF 13 MEDLINE on STN
AN 2000423543 MEDLINE
DN 20377936 PubMed ID: 10915608
TI **Papillomavirus** virus-like particles for the delivery of multiple
cytotoxic T cell epitopes.
AU Liu W J; Liu X S; Zhao K N; Leggatt G R; Frazer I H
CS Center for Immunology and Cancer Research, Princess Alexandra Hospital,
Woolloogabba, Queensland, 4102, Australia.
SO VIROLOGY, (2000 Aug 1) 273 (2) 374-82.
Journal code: 0110674. ISSN: 0042-6822.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200009
ED Entered STN: 20000915
Last Updated on STN: 20000915
Entered Medline: 20000906

L4 ANSWER 8 OF 13 MEDLINE on STN
AN 2000179467 MEDLINE
DN 20179467 PubMed ID: 10712890
TI Human **papillomavirus** vaccines.
AU Breitburd F; Coursaget P
CS Unite@a3 des Papillomavirus, Unite@a3 Mixte Institut Pasteur/INSERM U190,
Institut Pasteur, 25 rue du Docteur Roux, Paris, 75015, France.
SO SEMINARS IN CANCER BIOLOGY, (1999 Dec) 9 (6) 431-44. Ref: 102
Journal code: 9010218. ISSN: 1044-579X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200004
ED Entered STN: 20000505
Last Updated on STN: 20000505
Entered Medline: 20000427

L4 ANSWER 9 OF 13 MEDLINE on STN
AN 1998321505 MEDLINE
DN 98321505 PubMed ID: 9660068
TI Synthetic peptides of human **papillomavirus** type 18 E6 harboring
HLA-A2.1 motif can induce peptide-specific cytotoxic T-cells from
peripheral blood mononuclear cells of healthy donors.
AU Yoon H; Chung M K; Min S S; Lee H G; Yoo W D; Chung K T; Jung N P; Park S
N
CS Virus/Oncology Research Unit, Korea Research Institute of Bioscience and
Biotechnology, KIST, Yusong, Taejon, South Korea.
SO VIRUS RESEARCH, (1998 Mar) 54 (1) 23-9.
Journal code: 8410979. ISSN: 0168-1702.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199809
ED Entered STN: 19981006
Last Updated on STN: 19981006

Entered Medline: 19980924

L4 ANSWER 10 OF 13 MEDLINE on STN
AN 96147273 MEDLINE
DN 96147273 PubMed ID: 8564975
TI Occasional memory **cytotoxic T-cell** responses
of patients with human **papillomavirus** type 16-positive cervical
lesions against a human leukocyte antigen-A *0201-restricted E7-encoded
epitope.
AU Rensing M E; van Driel W J; Celis E; Sette A; Brandt M P; Hartman M;
Anholts J D; Schreuder G M; ter Harmsel W B; Fleuren G J; Trimbos B J;
Kast W M; Melief C J
CS Department of Immunohematology, University Hospital Leiden, The
Netherlands.
NC R01 CA 57933 (NCI)
SO CANCER RESEARCH, (1996 Feb 1) 56 (3) 582-8.
Journal code: 2984705R. ISSN: 0008-5472.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199603
ED Entered STN: 19960315
Last Updated on STN: 19960315
Entered Medline: 19960301

L4 ANSWER 11 OF 13 MEDLINE on STN
AN 96094441 MEDLINE
DN 96094441 PubMed ID: 7499833
TI Tumor-associated E6 protein of human **papillomavirus** type 16
contains an unusual H-2Kb-restricted **cytotoxic T**
cell epitope.
AU Gao L; Walter J; Travers P; Stauss H; Chain B M
CS Department of Immunology, University College Medical School, London, UK.
SO JOURNAL OF IMMUNOLOGY, (1995 Dec 15) 155 (12) 5519-26.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199601
ED Entered STN: 19960217
Last Updated on STN: 19960217
Entered Medline: 19960118

L4 ANSWER 12 OF 13 MEDLINE on STN
AN 95270280 MEDLINE
DN 95270280 PubMed ID: 7751006
TI Peptide engineering allows **cytotoxic T-cell**
vaccination against human papilloma virus tumour antigen, E6.
AU Lipford G B; Bauer S; Wagner H; Heeg K
CS Institute for Medical Microbiology, Technical University of Munich,
Germany.
SO IMMUNOLOGY, (1995 Feb) 84 (2) 298-303.
Journal code: 0374672. ISSN: 0019-2805.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199506
ED Entered STN: 19950629
Last Updated on STN: 19970203

Entered Medline: 19950622

L4 ANSWER 13 OF 13 MEDLINE on STN
AN 95251651 MEDLINE
DN 95251651 PubMed ID: 7733923
TI Human T helper cell **epitopes** overlap B cell and putative
cytotoxic T cell epitopes in the E2
protein of human **papillomavirus** type 16.
AU Lehtinen M; Hibma M H; Stellato G; Kuoppala T; Paavonen J
CS Dept of Chronic Viral Diseases, National Public Health Inst, Helsinki,
Finland.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1995 Apr 17) 209 (2)
541-6.
Journal code: 0372516. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199505
ED Entered STN: 19950608
Last Updated on STN: 19950608
Entered Medline: 19950530

=> d l4 1 ab

L4 ANSWER 1 OF 13 MEDLINE on STN
AB We analyzed capsomeres of human **papillomavirus** type 16 (HPV16)
consisting of the L1 major structural protein for their ability to trigger
a **cytotoxic T-cell** (CTL) response. To this
end, we immunized C57BL/6 mice and used the L1(165-173) peptide for ex
vivo restimulation of splenocytes prior to analysis ((51)Cr release assay
and enzyme-linked immunospot assay [ELISPOT]). This peptide was
identified in this study as a D(b)-restricted naturally processed CTL
epitope by HPV16 L1 sequence analysis, major histocompatibility
complex class I binding, and (51)Cr release assays following immunization
of C57BL/6 mice with HPV16 L1 virus-like particles (VLPs). HPV16 L1
capsomeres were obtained by purification of HPV16 L1 lacking 10 N-terminal
amino acids after expression in Escherichia coli as a glutathione
S-transferase fusion protein (GST-HPV16 L1 Delta N10). Sedimentation
analysis revealed that the majority of the purified protein consisted of
pentameric capsomeres, and assembled particles were not observed in minor
contaminating higher-molecular-weight material. Subcutaneous (s.c.) as
well as intranasal immunization of C57BL/6 mice with HPV16 L1 capsomeres
triggered an L1-specific CTL response in a dose-dependent manner as
measured by ELISPOT and (51)Cr release assay. Significant reduction of
contaminating bacterial endotoxin (lipopolysaccharide) from the capsomere
preparation did not diminish the immunogenicity. Antibody responses
(serum and vaginal) were less robust under the experimental conditions
employed. In addition, s.c. vaccination with HPV16 L1 capsomeres induced
regression of established tumors expressing L1 determinants (C3 tumor
cells). Our data demonstrate that capsomeres are potent inducers of CTL
responses similar to completely assembled T=7 VLPs. This result is of
potential relevance for the development of (combined prophylactic and
therapeutic) HPV-specific vaccines, since capsomeres can be produced
easily and also can be modified to incorporate heterologous sequences such
as early HPV proteins.

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(FILE 'HOME' ENTERED AT 15:47:26 ON 28 JUL 2003)

FILE 'MEDLINE' ENTERED AT 15:47:34 ON 28 JUL 2003

L1 73981 S EPITOP?
L2 3029 S CYTOTOXIC T CELL
L3 13805 S PAPILLOMAVIRUS
L4 13 S L1 AND L2 AND L3

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 4 of 4 returned.**☐ 1. Document ID: US 6524825 B1

L4: Entry 1 of 4

File: USPT

Feb 25, 2003

US-PAT-NO: 6524825

DOCUMENT-IDENTIFIER: US 6524825 B1

TITLE: Immune responses against HPV antigens elicited by compositions comprising an HPV antigen and a stress protein or an expression vector capable of expression of these proteins

DATE-ISSUED: February 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mizzen; Lee A.	Victoria			CA
Chu; N. Randall	Victoria			CA
Wu; Huacheng Bill	Victoria			CA

US-CL-CURRENT: 435/69.7; 424/192.1, 424/9.34, 435/39, 435/5, 435/7.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC
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L4: Entry 2 of 4

File: USPT

Jul 16, 2002

US-PAT-NO: 6419931

DOCUMENT-IDENTIFIER: US 6419931 B1

**** See image for Certificate of Correction ****

TITLE: Compositions and methods for eliciting CTL immunity

DATE-ISSUED: July 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vitiello; Maria A.	La Jolla	CA		
Chestnut; Robert W.	Cardiff by the Sea	CA		
Sette; Alessandro D.	La Jolla	CA		
Celis; Esteban	San Diego	CA		
Grey; Howard	La Jolla	CA		

US-CL-CURRENT: 424/201.1; 424/204.1, 424/208.1, 424/227.1, 424/228.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
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☐ 3. Document ID: US 6037135 A

L4: Entry 3 of 4

File: USPT

Mar 14, 2000

US-PAT-NO: 6037135

DOCUMENT-IDENTIFIER: US 6037135 A

** See image for Certificate of Correction **

TITLE: Methods for making HLA binding peptides and their uses

DATE-ISSUED: March 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kubo; Ralph T.	San Diego	CA		
Grey; Howard M.	La Jolla	CA		
Sette; Alessandro	La Jolla	CA		
Celis; Esteban	San Diego	CA		

US-CL-CURRENT: 435/7.24; 424/185.1, 435/7.1, 435/7.2, 530/328

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 4. Document ID: US 5817512 A

L4: Entry 4 of 4

File: USPT

Oct 6, 1998

US-PAT-NO: 5817512

DOCUMENT-IDENTIFIER: US 5817512 A

** See image for Certificate of Correction **

TITLE: Encapsidated recombinant viral nucleic acid and methods of making and using same

DATE-ISSUED: October 6, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Morrow; Casey D.	Birmingham	AL		
Porter; Donna C.	Birmingham	AL		
Ansardi; David C.	Warrior	AL		

US-CL-CURRENT: 435/320.1; 424/199.1, 424/217.1, 435/456, 435/465, 435/69.3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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